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15 April 1971

## MEMORANDUM FOR THE RECORD:

SUBJECT: Meeting with [REDACTED], OPFB, on 12 April 1971, Concerning the DDP [REDACTED] Program (Document Storage and Retrieval)

1. The meeting with [REDACTED] was arranged at HPS initiative ([REDACTED] to Mr. Briggs). The purpose was to learn OPFB's views of [REDACTED] in advance of submitting OPFB's request for \$900,000 for two copies of the existing [REDACTED] machine as part of the FY 1972 Program. [REDACTED], who visited HPS a week or so ago, had indicated that some controversy surrounded [REDACTED] in OPFB. We know, of course, that OPFB had denied OPB's request in the FY 1972 Program for the same [REDACTED] reproductions but did not know all of the reasons.

2. In the course of inquiring about [REDACTED] I acquired some facts about the Agency's approach to ADP problems and have therefore recorded them as well.

### 3. General - ADP Management

a. Mr. [REDACTED] is the OPFB man on Information Processing and Exploitation (IPE), one of the Agency's broad program budgeting categories. He also is Executive Secretary of the Information Processing Board, which is chaired by [REDACTED] Deputy Chief of OMB. Each Directorate is represented on the Board - ADP by [REDACTED] of the OPFB Systems Group. The Directorate representatives are known as Information Processing Coordinators. The Board is charged with matters other than ADP but tends in practice to focus primarily on computer

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problems. There are areas in the Agency that have computers which fall under the Board's responsibility but are outside of the IPE Program area - e.g. Commo, FUMSAC, ORD.

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b. The Office of Management and Budget (OMB) sometime ago required government agencies to have a control point for approval of computer purchases and leases. Colonel White, the Executive Director-Comptroller, is CIA's control point. He must approve any computer hardware contract of \$150,000 or over. An add-on of over \$4,000 per month also requires his approval, as does any software contract of more than \$50,000 per year. The Information Processing Board passes upon these contracts before submitting them to Colonel White for approval. GSA is charged by the Brooks Bill with monitoring government computer activity, and the Bureau of Standards is also involved in establishing technical codes and standards. The Bureau runs a technical advisory group but Mr. [REDACTED] did not seem to think it would have any value for DDP.

c. The IPE Program Category encompasses the following functions and organizations:

(1) Functions

Imagery Exploitation  
Signal Processing  
Discrimination  
Information Retrieval  
Central ADP (OCS)

(2) Organizations

DDI

DDIC  
IAS (Imagery Analysis Service)  
CRS (Central Reference Service)  
Map Library of OBG

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DDP

RID (Records Integration Division)  
SG (Systems Group)

Program in (There also used  
to be a group of about 20 in  
who worked on [REDACTED]  
program. [REDACTED] said he would  
have to see the current program to  
know if it had been transferred, as  
planned, to another component.)

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OCS (Office of Computer Services)  
Analysis Division of OEL

DDB

Nothing. (Did he overlook SIP3?)

DCI

Cable Secretariat

IP&E d. There are about \_\_\_\_\_ people in the Agency in-  
volved in ABR. The budget (for IPE, presumably) is about  
\_\_\_\_\_ million.

4. [REDACTED]

a. [REDACTED] and I agreed that in our conversation  
we were using [REDACTED]

b. Mr. [REDACTED] opened the conversation about [REDACTED]  
by listing (on the blackboard) the following elements of  
OPRS thinking last year when they deleted \$500,000 from  
the program. This covered building two reproductions of  
the existing [REDACTED] machine. IBM, he said, had been  
reluctant but had agreed last year to tool up and build  
the two machines. If he knew that the figure, presumably  
last year as this, was a "ballpark" figure, he did not say  
so. The reasons for the turn-down were:

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(1) Expense - It was a tight budget year.

(2) "So then what?" The program seemed to run on a horizontal line instead of moving upward. It was one of reproducing machines that are ten years old - possibly merely replacing them as the old ones break down. The cure was only temporary.

(3) [REDACTED] is a "dead branch of the technological tree". Only CIA has ever used or wanted the machine. The technology lacks "viability". OPPB tends to think that a system used and sought after in the commercial market place is one that is likely to be subjected to pressure for improvement, so that we inherit the improvements.

(4) Alternatives - OPPB did not consider alternatives last year but was merely looking for a proposed switch to some kind of program that would bring the storage and retrieval process into the technological mainstream.

(5) Excessive [REDACTED] for other Agencies - Mr. [REDACTED] believes that no one has looked seriously at the question of reducing the volume of [REDACTED] accepted from other agencies, which leads, he apparently thinks, to the extensive numbers of searches conducted by [REDACTED] (discussion on this point below.)

c. When I asked Mr. [REDACTED] to review what other Agency components are doing in the way of document storage and retrieval, as a possible source of ideas for alternatives; he mentioned two especially: CRS' use of aperture cards and NPIC's use of microfiche. He posited the following possible alternative systems:

(1) A strictly manual system of filing documents and retrieving them.

(2) Reels of microfilm - manual filing and retrieving. (He felt it was essential to use microfilm as a means of condensing files.)

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(3) Aperture card system such as CRS has (the AEGIS System): The microfilm is mounted on a card which is filed manually. It has some punched data on it in anticipation of use in a computer, but CRS is afraid of wear and tear on the film and prefers manual search. The cards are mounted on large reels in "tubs". The searcher withdraws the appropriate card from the reel, makes a copy with one hand while holding his place with the other, so that there is no misfiling, and provides the analyst with a throw-away copy. CRS uses a computerized index to obtain the address of the stored document. In contrast, [redacted] uses (as of now) a manual index search which leads in turn to a computerized document locator system and in turn to a computerized search on [redacted] for the microfilm itself. There are intervening manual steps between the two computer aspects.

(4) Microfiche - which EFIC uses (and R10 is experimenting with, according to [redacted]). This system also uses a computerized index but requires manual searching. The microfiche consists of a plastic envelope-card that holds a number of microfilm images so that a document of several pages may be available on a single card.

(5) Video file - a new technology that [redacted] is exploring for the community and which it is very hopeful about. This process involves the storage of documents on video tape. The index card and the document image are to be combined. [redacted] tentatively concluded that this system is not useful for small files. For some reason it is necessary to search a whole tape to find a single document.

(6) Laser technology - a far-out idea.

(7) The [redacted] System - CRS has been interested in this system and put \$60,000 into its budget last year for exploration of it. CRS took the funds out on the ground that CIA should not have

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to pay salesmen - that the MOSLER people should be glad to sell the system to CIA without being paid to do it. (Note that OMB made this cut; OPTB made the [REDACTED] cut.) Under this system the index is stored in the same system as the document so that the computer finds one and then the other without intervening manual steps.

d. Comparing [REDACTED] to the CRS and NPIC system, our discussion noted these distinctions:

(1) [REDACTED] begins with a manually produced index card and ends with a computerized search for the microfilmed document. This will change, of course, as RID computerizes the Main Index. (Note that the [REDACTED] card is computerized but it leads not to [REDACTED] but the [REDACTED] file room.) The CRS and NPIC systems, as indicated above, begin with a computerized index card and end with manual searches for the microfilm. CRS provides a blown up copy. RID provides a viewer for the film, to be used at the requesting desk.

(2) [REDACTED] conducts many more traces than CRS and NPIC. Mr. [REDACTED] doesn't have the comparative figures but he believes this to be the case.

e. The discussion also revealed at least one apprehension on Mr. [REDACTED]'s part - if I understand the [REDACTED] system correctly. He seemed to think that the [REDACTED] coming from other agencies had some effect on the quantities of material stored in [REDACTED] thereby affecting the need for excess capacity. He was interested in hearing that, to the best of my knowledge, [REDACTED] is loaded only with information that meets indexing criteria and that these criteria are established with DDD interests only or primarily in mind. Therefore reducing outside requests would not change the criteria and would not result in a diminution of material stored. It would only reduce the volume of search requests - that is, the numbers of times [REDACTED] is used. The search requests undoubtedly involve other operations of RID; but our interest here is confined to the [REDACTED] aspects.

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25X1A f. Mr. [ ] implied that the CRS and NPIC systems should be good enough for DDP - although he certainly had an open mind on the whole subject. He did not have information at hand, however, on the comparative numbers of traces. The sheer volume of traces might well require the [ ] computerized process for DDP. This needs more study.

25X1A g. Mr. [ ] holds to the view that a system in use in the commercial market is somehow better, as indicated above, because it inherits improvements generated by the market. Perhaps there is room for consideration of the possibility that a commercially viable and changing product also induces pressures for expensive change that is not really essential to the objective sought. There can be a point at which technology induces a program. Perhaps there is something to be said for an old machine so lumbering that it is not caught up in the ever-upward march of technology. I asked Mr. [ ] on this point what he would say if CRS asked for another tub or reel of its present system - which sounds to me like something of an old-hat affair. He felt, however, that this was a viable system, so much in general use as to benefit from commercial improvements. This assumption may not be altogether valid.

25X1A As part of this discussion I asked Mr. [ ] whether advancing technology did in fact produce more "efficient" computers. His first response was yes, although he qualified it as the discussion proceeded. He noted that the "memory core" of the computer will now hold 3 million characters where some years ago a comparable memory core might, for the same price, hold only 750,000. However, it is hard to find a use for 3 million characters. Such an efficient machine might result in illusory savings, inviting uses not really essential to operations.

25X1A h. Mr. [ ] gave the impression that he had not given much thought to the point (made by IG) that computers tend to lock personnel and funds in place. He granted that this could be a problem for a small service such as the DDP which believes in personnel rotation. He does feel that having so many separate and disparate ADP systems in a small agency like CIA does not, on the surface, seem reasonable.

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i. Mr. [ ] has the impression that the several computer sections of CIA do not work together as closely as they should - that they are a little jealous of each other. He doubted, for example, that Systems Group was as much as in touch as it should be with CNS' explorations of the MOSLER System, which sounds as though it would do what the early [ ] hoped to do.

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j. I asked if the IP Board spent any time on the question of the content of information indexed for computers or microfilming - for example, establishing standards or assuring that standards existed. He said that the Board met too infrequently and was too casually organized to provide adequate study or review of this question.

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k. Mr. [ ] wanted to know if [ ] would be in the FY 1973 Program. I told him I wasn't sure at this stage how the ADP problems would be presented.

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l. Mr. [ ] suggested that I asked [ ] for:

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(1) A 13 October 1969 memorandum by Colonel White which has to do with information processing and which established the IP Board. It talked about a project approval system in the ADP field.

(2) A 21 April 1970 Executive Director-Comptroller to DDB memo on approval of ADP hardware and software.

#### B. Tentative Comments and Questions

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a. We will want to be very careful of our facts in our FY 1973 budget submission, making clear whether the funds for [ ] are for extra storage, for replacements of old machines, for both, or to have funds available for other alternatives still to be found.

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b. If we wish to justify a reproduction of the present [ ] machines, the following points should be covered:

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(1) That the only documents going into the [redacted] System are indexed documents and cross references. Chronos of memoranda, dispatches, etc. are not incorporated in it. The indexing criteria are very narrow - based on DDP's own needs and its responsibilities under NSCD #5 as the repository for the intelligence community of [redacted] [redacted] for other agencies affect the volume of use but do not, I believe, materially affect the [redacted] storage needs. (We should, however, verify this point.)

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(2) That most of the [redacted] for other agencies are completed after a search of the index since the results are negative. [redacted] is used only when the index search is positive.

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(3) That the DDP requires a high-volume document search system for reasons other than the [redacted] from other agencies. Unlike CRS, which is primarily concerned with [redacted]

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(5) What is the [redacted] life expectancy? At one point the system was threatened with a lack of cronar material for its cell system, but that problem has apparently been solved. Even if we anticipate a replacement system, are we ready for it (see below) and do we need a new [redacted] in the background in case we don't find a suitable replacement system?

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(6) Are we satisfied that the [REDACTED] System will meet foreseeable future needs as well as it has met the needs in the past? (Did any plane ever come along that was really better than the DC-3?)

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c. The MPS tour of RID left the impression that RID has learned to make effective use of existing [REDACTED] machines by purging inactive files, and it also left the impression that storage off-line and annual accretions to the file do not represent insurmountable problems so long as there are workable machines on hand. Perhaps new [REDACTED] machines may be better justified as replacements for existing machines, now ten years old and subject to breakdown, than as storage. We should have RID's views on this.

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d. If a replacement system is in view, will it consist essentially of a modification of [REDACTED] or an entirely new system? Has the MOSLER System been considered and what are its advantages and disadvantages?

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e. Does RID contemplate any computer linkage not now existing between the index card search and the document retrieval via [REDACTED]? The present desk review of the product of an index search before documents are requested from [REDACTED] is probably an important element in the real efficiency of the present system, since it assures that the desk will not be swamped with volumes of unusable information. The necessity for this type of human judgment at intervals in the system should not be overlooked in the question of whether [REDACTED] fits adequately into mainstream technology. Mainstream technology would probably try to make the direct link between the index and the document, a process justifiable for most situations but perhaps not for name tracing.

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f. How ready is the CS to move into a new system for document storage and retrieval? Is it premature to tackle the storage and retrieval problem before the computerization of the index has been solved? Are there questions concerning the CS' future records needs that need resolution before a replacement system for

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25X1A [REDACTED] is found? What guidelines has CPBHR received from the CS Records Committee with respect to future records needs that may affect planning on [REDACTED] 25X1A

g. Although \$300,000 seems expensive, that amount covers machines with at least a ten-year life expectancy which we will own. The maintenance contract is now \$80,000 a year. How does \$300,000 spread over a ten-year period compare to probable annual costs of a new leased system plus the annual "unbundling" costs?

h. Is it valuable to DBP to have an ADP system that does not mix well with other ADP systems? Is there a security factor involved?

i. Before we enter a new system, should we not reconsider the question of the contents of documents filed? Are we satisfied with our reportorial systems and our indexing systems?

25X1A j. To obtain some of the answers to the foregoing and fill in our background on the ADP systems in general, it will be useful to meet with [REDACTED] of Systems Group, the DBP IP Coordinator. That might be followed, per Mr. [REDACTED] suggestion, with a visit to the IP Coordinator for DBI, [REDACTED], to learn about the US and NPIC methods and the possible MOSLER alternative. This kind of background would seem especially helpful to DBI in assisting CPBHR to defend its FY 1973 [REDACTED] 25X1A

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25X1A LMF/NPS/PRG: [REDACTED] (15 Apr. 71)

Distribution:

Orig - LMF/PRG (File in: IG Survey of CPBHR)

1 - NPS/PRG Chicago file

25X1A X - NPS/PRG -- [REDACTED]